

In th Abstract:

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Abstract

A circuit arrangement for generating square pulses has an edge-triggered flip-flop 1 and at least one comparator 2, whose output is connected to the trigger input of the flip-flop 1. An energy-storing element 3 is charged in alternation as a function of the switching state of the flip-flop 1. At least one switching threshold resistor 4 is connected in series with the energy-storing element 3, and a voltage generated by the current flowing through the energy-storing element 3 drops at this resistor. The voltage dropping at the switching threshold resistor is fed to the signal input of a comparator 2. The energy-storing element 3 is disposed in the transverse branch of a bridge, in each of whose four bridge segments a respective switch 7, 8, 9, 10 is disposed. The switches 7, 8, 9, 10 are each connected in pairs in crossover fashion by the flip-flop 1, so that the current flow in the transverse branch is reversible. The bridge is connected in series with the switching threshold resistor 4, and the junction point of the bridge to the switching threshold resistor 4 is connected to the signal input 2a of the comparator 2.

The circuit arrangement for generating square pulses according to a magnetic field strength has an edge-triggered flip-flop; a comparator connected to the flip-flop; a bridge with four bridge segments, each including an electronically controlled switch, and with a transverse branch including an energy-storing element consisting of an inductive resistor acting as a magnetic field probe; and a switching threshold resistor connected with the energy-storing element and with a signal input of the comparator. The switches are each connected in pairs in crossover fashion by the flip-flop, so that current flow in the transverse branch is reversible. An improved compensation current sensor, which is less sensitive to component tolerances, includes the circuit arrangement for generating square pulses in a controller.